Air Quality Permitting
Statement of Basis

April 7, 2006

Permit to Construct No. P-050056

Ada County – Ada County Landfill Boise, Idaho

Facility ID No. 001-00195

Prepared by:

Shawnee Chen, P.E.
Engineer, Tech I
AIR QUALITY DIVISION

FINAL

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Acronyms, Units, and Chemical Nomenclatures

ACLF	Ada County landfill
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
HAPs	Hazardous Air Pollutants
HHLF	Hidden Hollow Landfill
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
LFG	Landfill gas
MACT	Maximum Achievable Control Technology
MSW	municipal solid waste
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOx	nitrogen oxides
NRC	North Ravine Cell
NSPS	New Source Performance Standards
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
Rules	Rules for the Control of Air Pollution in Idaho
scfm	standard cubic feet per minute
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	Synthetic Minor
SO_2	sulfur dioxide
TAPs	Toxic air pollutants
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho, for issuing permits to construct.

2. FACILITY DESCRIPTION

Ada County Landfill (ACLF) is a municipal solid waste landfill and is located at 100300 Seamans Gulch Road northwest of Boise. The landfill is owned and operated by Ada County.

ACLF consists of the existing active HHLF cell and yet to be constructed NRC, which is planned to accept municipal solid waste (MSW) in 2007. The HHLF cell encompasses an area of approximately 110 acres with design capacity of 16 million cubic yards and is anticipated to be closed in 2020. The NRC was designed to have a final capacity of 70 million cubic yards and an active life of 90 years based on the anticipated growth patterns. The NRC encompasses an area of approximately 260 acres.

ACLF generates odorous landfill gas (LFG). LFG is a byproduct produced from decomposition of organic material in the MSW landfill. LFG is typically a mixture of approximately 50% methane and 50 % carbon dioxide, and a minor amount of nonmethane organic compounds (NMOC). Within the NMOC are some hazardous air pollutants (HAPs) and toxic air pollutants (TAPs). A trace amount of hydrogen sulfide gas is also found in the LFG. Landfills may continue to generate LFG for 10 to 20 years, or longer, after waste disposal has ceased.

The LFG collection system and control system are required to control the LFG from ACLF in accordance with 40 CFR 60 Subpart WWW. The timeframe to install and operate the LFG collection system and control system to control the LFG produced and to be produced at ACLF is specified in 40 CFR 60 Subpart WWW. It is included in the permit.

The existing ACLF gas collection system and control system (two identical enclosed flares system) began operating in May 2004 as a volunteer control measure. The existing LFG collection system provides gas collection for the phase I closure of the HHLF cell that is 46 acres of the 110-acre HHLF cell surface. The existing control system was designed to accommodate potential HHLF cell LFG flows with the total design capacity of 4,000 scfm. Based on LANDEGEM modeling data using the anticipated growth patterns, the existing control system has the capacity to control LFG flows of HHLF and NRC cells until 2038.

Additional flare(s) will need to be installed onsite before the design capacity of the existing control system is exceeded. Additional flare(s) may also be added as a backup system to comply with Start up, Shut down and Malfunctions (SSM) plan according to the provisions in 40 CFR 63.6(e)(3). The future gas flare site is included in Figure 1 of the application. G2 Energy (Facility ID 001-00214) has been permitted to produce an electrical energy using LFG from ACLF. G2 Energy is a private company. It is independent from ACLF operations.

In addition to the flares, the ACLF utilizes a wood chipper and power screen to separate processed wood debris material into various sizes. The wood chipper consists of a 12-foot diameter cone to cut and shred various wood debris material (i.e., stumps, logs, brush, yard waste, pallets, and construction waste). The chipper is powered by a 650-horsepower diesel engine generator. Wood debris material is loaded into the 12-foot cone and processed through a drop chute onto a conveyor. The conveyor transports the wood debris material to a power screen which further separates the processed material by shaking out the wood chips and debris into various sizes. The power screen is powered by a 106-horsepower diesel engine generator.

3. FACILITY / AREA CLASSIFICATION

ACLF is not a major facility as defined in IDAPA 58.01.01.205, nor is it a designated facility as defined in IDAPA 58.01.01.006.27. The potential to emit of any criteria air pollutant is below 100 T/yr, and potential emissions rates for HAPs are below 25 T/yr collectively, and less than 10 T/yr for any single HAP. The primary Standard Industrial Classification (SIC) code for the facility is 4953, refuse systems. The facility is defined as a synthetic minor (SM) facility because, without using the control system as required in 40 CFR 60 Subpart WWW, the total HAPs collected from the collection system would exceed the major source threshold level for total HAPs of 25 tons per year.

The facility is not subject to Prevention of Significant Deterioration (PSD) requirements because its potential to emit is less than all applicable PSD major source thresholds.

ACLF is located at 100300 Seamans Gulch Road, northwest of Boise, in Ada County, Idaho. ACLF is located within Air Quality Control Region (AQCR) 64 and UTM zone 11. The area is designated unclassifiable for all regulated criteria air pollutants.

The AIRS information provided in Appendix A defines the classification for each regulated air pollutant at Ada County Solid Waste Management – Ada County Landfill. This required information is entered into the EPA AIRS database.

4. APPLICATION SCOPE

This permit modification allows Ada County to expand the Ada County Landfill (ACLF) to include a new North Ravine Cell (NRC) in addition to the existing Hidden Hollow Landfill (HHLF) cell. This PTC modification includes the requirements under IDAPA 58.01.01.859, 40 CFR 60 Subpart WWW that was incorporated by reference under IDAPA 58.01.01.859, and 40 CFR 63 Subpart AAAA.

4.1 Application Chronology

December 20, 2005	DEQ received the 15-day Pre-permit Construction application
January 4, 2006	DEQ approved the 15-day pre-permit construction
January 19, 2006	DEQ declared the application complete
March 20, 2006	Facility draft permit sent to the facility for review
April 7, 2006	DEQ received comments on facility draft permit

5. PERMIT ANALYSIS

This section of the Statement of Basis describes the regulatory requirements for this PTC action.

5.1 Equipment Listing

There is no change to the equipment listing in the former PTC issued June 15, 2004, as a result of this permit action.

5.2 Emissions Inventory

The emissions inventory for the PTC issued June 15, 2004, was developed based on the maximum design capacity of the existing control system (two enclosed flares). At this time, all collected LFG from ACLF are routed to the existing control system and no additional control system is installed. Therefore, no changes to the EI used in the June 15, 2004 permit.

5.3 Modeling

The modeling analysis for the PTC issued June 15, 2004, addressed all emissions sources, including the emissions of the existing control system (two enclosed flares) at the maximum design capacity. At this time, all collected LFG from ACLF are routed to the existing control system, and no additional control system is installed. Therefore, no modeling is required for this permit action.

5.4 Regulatory Review

This section describes the regulatory analysis of the applicable air quality rules with respect to this PTC modification.

IDAPA 58.01.01.203 ..... Permit to Construct Modification

ACLF proposed to expand ACLF to include NRC. The proposed project is a modification in accordance with IDAPA 58.01.01.006.56 and 859.02.e. The proposed project does not qualify for an exemption under Sections 220 through 223 of the Rules; therefore, a Permit to Construct modification is required.

IDAPA 58.01.01.213 ..... Pre-permit Construct

ACLF submitted a 15-day pre-permit construction application. The pre-permit construction was approved on January 4, 2006.

IDAPA 58.01.01.859..... Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction or Modification on or After May 30, 1991

ACLF proposed to expand ACLF to include NRC. The proposed project is a modification in accordance with IDAPA 58.01.01.859.02.e. Therefore, ACLF is subject to this regulation when NRC commenced construction in February 2006.

IDAPA 58.01.01.859.04.b.....Require Tier I Application.

ACLF is required to submit a complete Title V application within one year of the modification. The modification date is when NRC commenced construction in February 2006.

40 CFR 60 Subpart WWW..... New Source Performance Standards

40 CFR 60 Subpart WWW was incorporated by reference under IDAPA 58.01.01.859. It applies to each municipal solid waste landfill that commenced construction, reconstruction or modification on or after May 30, 1991. ACLF is modified when it is expanded to include NRC. The NRC commenced construction in February 2006.

40 CFR 63 Subpart AAAA..... National Emission Standards for Hazardous Air Pollutants & MACT

40 CFR 63 Subpart AAAA applies to ACLF because ACLF has accepted waste since November 8, 1987, and is an area source landfill that has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m^3 and that is not permanently closed as of January 16, 2003.

40 CFR 60.18 ..... General Provision, General control device requirements

The flare requirements apply to open fare system. ACLF's two enclosed flares are not subject to the requirements.

5.5 *Permit Conditions Review*

This section describes only those permit conditions that have been revised, modified or deleted as a result of this permit action. All other permit conditions remain unchanged.

5.5.1 Permit Conditions 1.1 and 1.2 are revised to reflect the purpose for this permit modification.

5.5.2 Permit Condition 1.3 is revised to identify ACLF as an emissions unit and two enclosed flares systems as emissions control system.

5.5.3 Permit Conditions 2.1 and 2.2 are revised to describe the ACLF- the emissions source and its emissions control system – two enclosed flares system. The statement of one flare being back up flare is removed from former Permit Condition 2.1. The two enclosed flares were modeled for the June 15, 2004 permit. They were assumed to be operated continuously. ACLF is to use the two enclosed flares to control the LFG from the ACLF.

5.5.4 Former Permit Conditions 2.10, 2.11, and 2.14 are removed because they are no long applicable.

5.5.5 New Permit Condition 2.10.1 requires ACLF to route LFG to the second enclosed flare when, or before the first enclosed flare reaches its design capacity of 2,000 scfm of LFG.

5.5.6 Permit Condition 2.10.2 requires ACLF to install additional control system before the total flow rate of LFG from the HHLF cell and NRC reaches the design capacity of the existing flare system (i.e. 4,000 scfm LFG). Based on LANDEGEM modeling data the anticipated growth patterns, the total combined future gas flows for the existing HHLF Cell and NRC are over 4,000 scfm LFG in year 2039.

Additional flare(s) may also be added as a backup system to comply with Start up, Shut down and Malfunctions (SSM) plan according to the provisions in 40 CFR 63.6(e)(3). The future gas flare site is included in Figure 1 of the application. G2 Energy (Facility ID 001-00214) has been permitted to produce an electrical energy using LFG from ACLF. G2 Energy is a private company. It is independent from ACLF operations.

5.5.7 Permit Condition 2.13 requires ACLF to conduct performance test and to submit source test report in accordance with IDAPA 58.01.01.157 and source test requirements specified in 40 CFR 60 Subpart WWW.

5.5.8 Permit Conditions 2.17 to 2.25 are added to the permit. ACLF commenced construction of NRC in February 2006, after 15-day per-permit construction approval, which is a modification to ACLF per 40 CFR 60 Subpart WWW and IDAPA 58.01.01.859. Therefore, ACLF is now subject to 40 CFR 60 Subpart WWW and IDAPA 58.01.01.859. September 28, 2004 source test indicated that NMOC emissions rate exceeded 50 megagrams per year for the existing HHLF cell of ACLF. This triggered the requirements of installation collection system and control system at ACLF per 40 CFR 60 Subpart WWW. Permit Conditions 2.18 and 2.25 are the requirements taken from 40 CFR 60 Subpart WWW that apply to ACLF based on information in the application. Should, in the future, changes made to ACLF trigger other requirements in 40 CFR 60 Subpart WWW, requirements in 40 CFR 60 Subpart WWW shall govern.

5.5.9 Permit Conditions 2.26 to 2.35 are the requirements taken from 40 CFR 63 Subpart AAAA that apply to ACLF based on information in the application. 40 CFR 63 Subpart AAAA applies to ACLF because ACLF has accepted waste since November 8, 1987, and is an area source landfill that has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m^3 and that is not permanently closed as of January 16, 2003. Should, in the future, changes made to ACLF trigger other requirements in 40 CFR 63 Subpart AAAA, requirements in 40 CFR 60 Subpart AAAA shall govern.

5.5.10 General provision of the permit is replaced with the updated one from the most current template.

6. PERMIT FEES

ACLF submitted a $1,000 PTC application fee on December 20, 2005, in accordance with IDAPA 58.01.01.224. In accordance with IDAPA 58.01.01.225, ACLF is subject to the PTC processing fee of $500. DEQ received the processing fee on April 13, 2006.

7. PERMIT REVIEW

7.1 Regional Review of Draft Permit

The draft permit was provided for Boise regional office review on March 14, 2006. Comments were received. The comments related to this PTC modification were addressed.

7.2 Facility Review of Draft Permit

The facility draft was sent for facility draft review on March 20, 2006. The comments were received on April 7, 2006. They are addressed in the permit.

7.3 Public Comment

An opportunity for public comment period on the PTC application was provided in accordance with IDAPA 58.01.01.209.01.c. During this time, there were comments on the application, and no requests for a public comment period on DEQ's proposed action.

8. RECOMMENDATION

Based on review of application materials, and all applicable state and federal rules and regulations, staff recommend that Ada County – Ada County Landfill be issued a final PTC No. P-050056 for ACLF expansion, NRC construction. No public comment period is recommended, no entity has requested a comment period, and the project does not involve PSD requirements.

SYC/bf Permit No. P-050056

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Appendix A

AIRS Information

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AIRS/AFS[a] FACILITY-WIDE CLASSIFICATION[b] DATA ENTRY FORM

Facility Name: Ada County – Ada County Landfill
Facility Location: Ada County
AIRS Number: 001-00195

AIR PROGRAM POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment
SO_2	B							U
NO_x	B							U
CO	B							U
PM_{10}	B							U
PT (Particulate)	B							
VOC	B		WWW					U
THAP (Total HAPs)	SM				AAAA			
			APPLICABLE SUBPART					

[a] Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

[b] AIRS/AFS Classification Codes:

A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class "A" is applied to each pollutant which is at or above the 10 T/yr threshold, or each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.

SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.

B = Actual and potential emissions below all applicable major source thresholds.

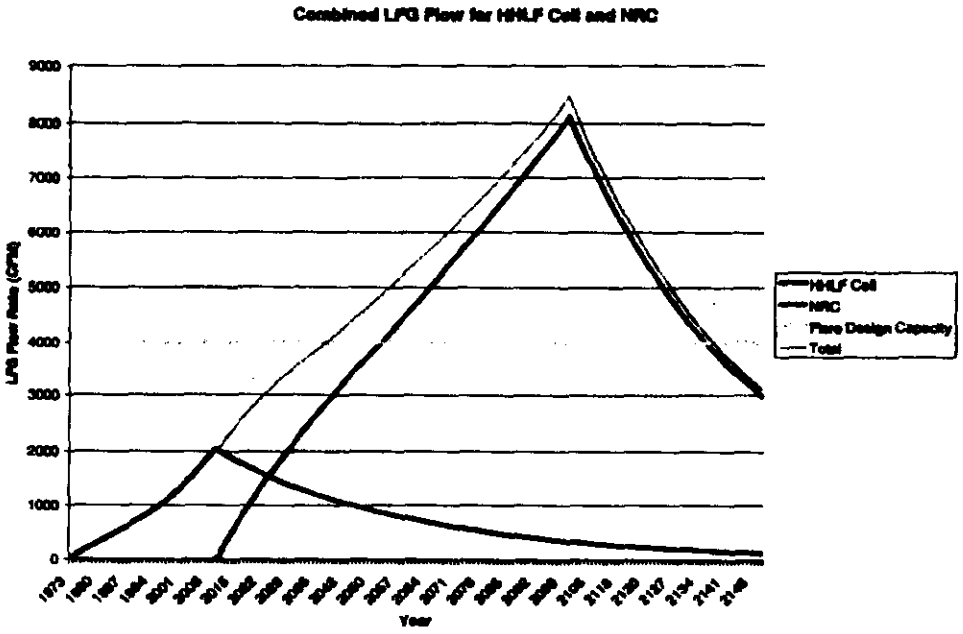
C = Class is unknown.

ND = Major source thresholds are not defined (e.g., radionuclides).

Appendix B

Predicted LFG Generating Rate by Applicant (a Chart)

P-050056



Based on current LANDGEM modeling data, the total combined future peak gas flows for the existing HHLF Cell and NRC are over 4,000 cfm in year 2039. Therefore, data indicate that the existing flare system has the capacity to control LFG flows until 2038, which includes NRC operations for the first 30 years.